

PX 3

(Google's Proposed Redactions)

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Pre-Read Context

This doc currently only captures an assessment of the situation and the plausible scenarios over a period. Implications and mitigations for market or Google are not covered today, no recommendation on solutions yet.

Current situation: What do we know today?

TI;dr: Apple is making progress on all 4 key ingredients of advertising - Inventory, Data, Tech and Measurement. In addition some ad tech market presence and increasing scrutiny from regulators.

- [Inventory] Apple is increasing their O&O footprint with the introduction of [new ad positions \(POV\)](#).
- [Inventory] Apple is on the rise of striking [exclusive TV partnerships](#) - MLS (major league soccer) and NFL, NBA rumors.
- [Tech] Enough articles in the press regarding Apple's ambitions to [build ad technology](#). Apple has not announced anything publicly.
- [Tech] Talent acquisition - outreach to Googlers and [job postings](#) looking for ad tech talent.
- [Data & Measurement] ATT (app tracking transparency) rules apply [differently](#) to Apple and provide Apple inherent advantages for targeting & measurement.
- [Data] Apple has the advantage of having an "always ON" signed in Apple ID for every Apple device.
- [Marketing] Unusually [higher presence in Cannes](#) Lions 2022.
- [Regulatory] CMA mobile ecosystem calls out both Google and Apple for thwarting fair competition but does lean on [Apple imposing higher restrictions](#) for potential competitors vs Google.

Understanding Motivations

To understand what Apple is likely to build for its ad tech ambitions, it would be beneficial to understand the motivations behind the renewed ad tech interests. Depending on the motivations, we can do a better scenario analysis and weigh the probability of success and threats to Google's business and market implications.

#1 Delivering on their mission of delivering the best consumer experiences

Apple's ad ambitions come from their need to establish their influence and control throughout the consumer journey and we can see more of their uber actions geared towards penetrating deeper into the consumer's online journey.

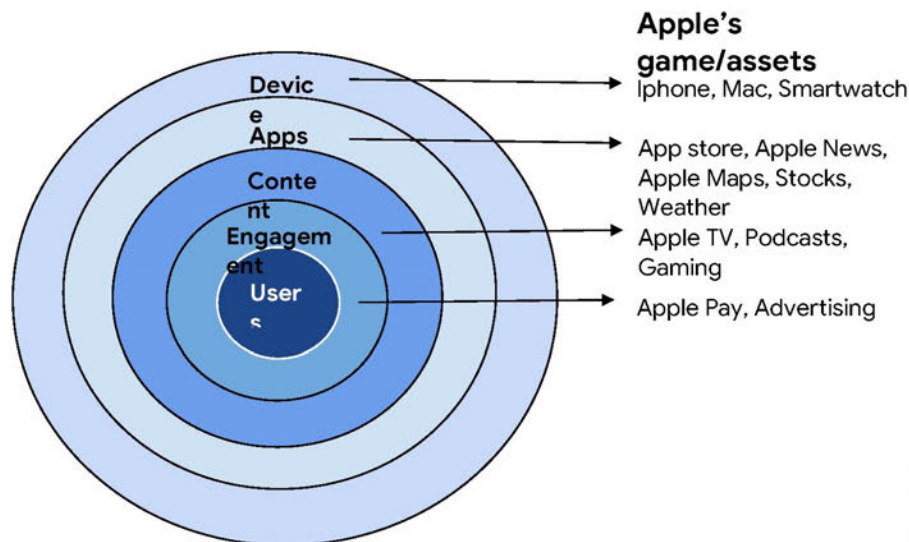


Exhibit 1: Apple's ambitions to deepen its touch points with consumer

Device -> Experiences -> Content -> Action -> Measurement with Apple pay

#2 Revenue diversification with focus on increasing services revenue

The Central Finance Market Intelligence team shared a detailed [study](#) on Apple revenue trends, pressures and their focus on increasing services revenue as the path for sustainable growth. The slide below is particularly interesting and shows the growth of RPU (revenue per user) over the years.

Commented [1]: Dan Comments,

@snehath@google.com - can we discuss this framework? I think we might simplify it to (1) Users, (2) Ecosystem, (3) monetization. For me ads falls squarely into monetization, since arguably no ads would result in a better user experience.

Sure happy to chat through, what do you consider as ecosystem? Everything from Device to content? I would differ on no ads would result in better user experience, ads done right can increase user engagement --> experience.

My thought is that ecosystem includes everything from AirPods / Apple watch to Apple TV / Fitness+... it is a way in which Apple can (1) lock users into its ecosystem, and (2) offer a compelling bundle of products and services. Monetization is the third bucket where Apple eventually offers hardware/software bundles as a service. In the interim they monetize some of their singleton offerings, but many of their services offerings will never be that profitable on their own.

Assigned to Sneha Thomas

Commented [2]: This is important because advertising is one of the few ways that Apple can continue to grow its "attach rate" of services. That's because most of Apple's services are tied to the installed base of hardware, and very few new services revenue opportunities offer the TAM and margins of ads.

Also important is that "Other Services" = mostly Ads here (mostly TAC). App Store and Ads comprise ~2/3 of Apple's services revenue and thus are the most important segments to grow. AppStore and TAC are facing regulatory risk, so Apple is pressured to grow their O&O ads business.

@snehath@google.com

Commented [3]: Agreed. Can you help me connect how ads Margin (TAM i understand) can work out great for Apple when its other services are predominately TAC based (Traffic acquisition costs via 3P)? Or are you suggesting that Apple is trying to move away from that high TAC (grey bar) to more Apple O&O?

Commented [4]: Let's discuss this in today's meeting

Commented [5]: My view is that an estimated ~15% of Apple total profit is at risk of TAC payments halt, either by regulation or Google's choice. They likely want more control of their ads business by growing O&O so they aren't at the mercy of exogenous forces.

Apple has grown Services revenue per iPhone user from \$33/user in 2015 to \$65/user in 2021

The biggest driver (~40% of growth) has been App Store commissions, which went from \$10/user in 2015 -> \$23/user in 2021

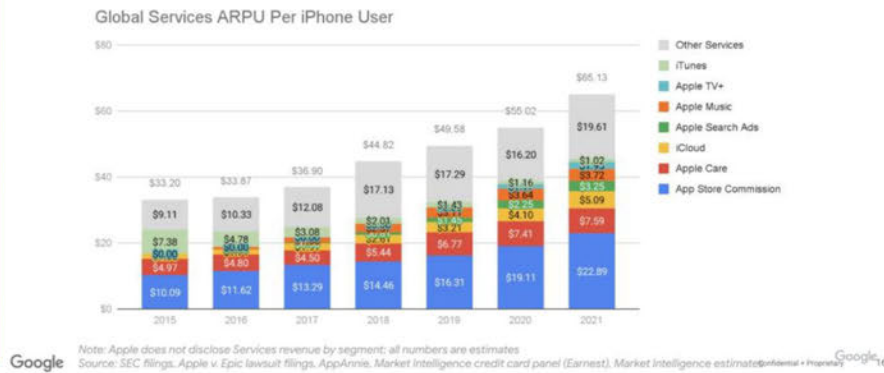


Exhibit 2: Global service ARPU per iPhone user

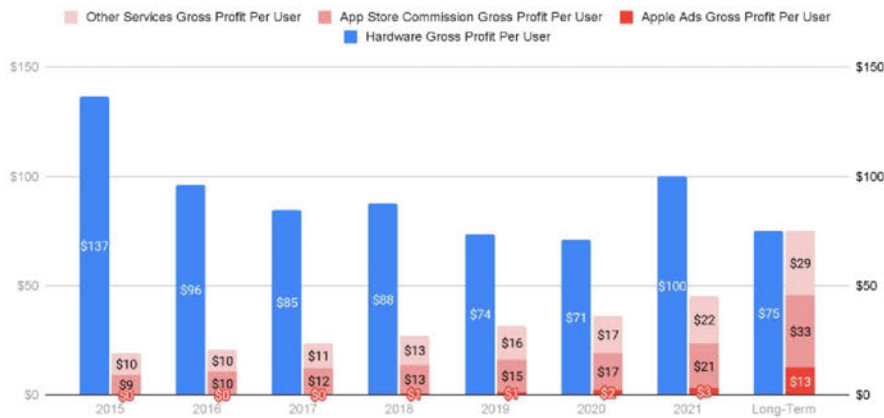
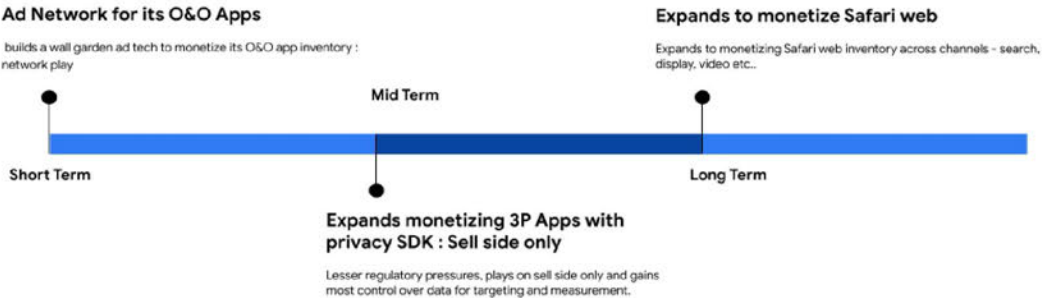


Exhibit 3: Apple Gross Profit Per iPhone User

Note: "Long-Term" forecast assumes gradual reversion to the mean of hardware profitability, continued double-digit growth of the App Store, and Apple's ads business achieving at least the low end of its long-term \$20-30B revenue potential
Source: Market Intelligence team estimates (corrywang@)

Additional motivations considered are in the appendix [here](#).

What are they likely to build?



Google

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Short Term: Walled Garden Ad Network for O&O Apps

We suspect Apple’s fastest to market and least resistant path in advertising would be to build a walled garden network for monetizing its owned and operated App properties buying interface for all of their O&O inventory which is only available directly working with Apple. Also believe that it will be an objective based buying across all of Apple properties including search and InApp ad experiences.

How it can play out:

Inventory	Apple O&O inventory as a network <ul style="list-style-type: none">● Search ads expansion with more native search experiences on devices● Additional app store placements, News, Stocks, Arcade● Making more O&O apps ad supported - Maps, Podcasts, Books● Reduced failures around brand safety, fraud detection
Data	To begin, everything would be user consented 1P data used to monetize their O&O inventory.

	<ul style="list-style-type: none"> ● Potential to do model based audiences with on-device data which will get Apple unique signals and have a high fidelity modeled audiences. ● Potential to link devices using Apple ID and easily get cross device targeting signals and measurement across apple devices.
Tech	<ul style="list-style-type: none"> ● Easiest to build, can reuse iAd components or build from scratch a booking interface to be a buying door for all their O&O. ● Mostly will be an objective based network buy with limited targeting and measurement options. ● Then move onto to building additional targeting criterias and gradually bringing in house all bidding for O&O,
Timing	12 - 18 months for the first version of the ad network. 1H 2024.
Early Indicators	<ul style="list-style-type: none"> ● [Already happening] Hiring of more ad tech talent - data science engineers, scientists ● [Already happening]] Building of an in house sales team. ● [Already happening] More ad placement announcements increasing O&O ● [Speculation] Expansion into emerging channels - Audio, CTV ● [Watchlist] Changes to NBCU¹ partnerships and revenue as exclusive reseller
Regulatory Risks	Low-Med (may invite scrutiny from regulators like CMA that ATT was pretextual move to improve its ads business)

¹ Today NBCU is the exclusive reseller for Apple O&O. [Here](#).

How big a business?

While Apple's ad business on its O&O properties is only \$4B today, we anticipate it could grow to \$6-10B over the next several years - and perhaps as high as \$20-30B+ longer term (Exhibit)

- **Today (LTM): \$4.2B.** Today, Apple's advertising business primarily comprises App Store Search Ads, which are already a [\\$4.2B revenue business](#). The only other ad-monetized Apple properties are News and Stocks, which currently generate <\$100M in ad revenues.
- **Near-term: \$6-10B.** We know that Apple has internally forecasted \$6-7B of App Store ads revenue by 2026, based on leaked data from [UK regulatory filings](#). We believe this forecast is highly conservative, given that [Apple is already rolling out new ad inventory this year](#) for the App Store "Today" tab and app "Details" pages; we note that similar ad formats on the Play Store actually account for a *majority* of our Play Store ads revenue. Moreover, [Bloomberg](#) recently reported that Apple is exploring adding search ads to Apple Maps; we note Google Maps' ads business (ex-Hotel Ads) is currently at a \$1.6B

annual revenue runrate, with \$1.25B coming from Local Universal (i.e. search) ads specifically.

- **Long-term: \$20-30B?** Over the long-term, we believe Apple's App Store Ads can likely become a \$10-20B business, aka ~10-15% the size of App Store in-app purchase billings; [REDACTED] Beyond the App Store, we anticipate Apple could generate billions of dollars from new ad experiences in Apple Maps, Spotlight,¹ Apple TV / TV+, and potentially other apps such as Apple Music, Podcasts, Books, etc.

Long Term Potential - \$20-30B+

Near-Term Potential - \$6-10B

\$6-9B: Apple Search Ads, Expansion to Today Tab / Details Page

\$500M-\$1B: Apple Maps Ads

\$100-200M: News & Stocks Ads

Revenues Today - \$4.2B

\$4.1B: Apple Search Ads

\$50-100M: News & Stocks Ads

\$10-20B: Apple Search Ads

\$5-15B+: Ads on Spotlight / Limited Version of "Apple Search"

\$2-5B: Apple Maps Ads

\$1-5B: Apple TV Ads

\$200-500M: News & Stocks Ads

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Exhibit 4: Apple's Ad Revenue Opportunities on Owned & Operated Properties

Source: Market Intelligence team estimates (corrywang@)

Mid Term: Expands monetizing 3P Apps with privacy SDK : Focusing on Sell side

Staying true to their motivation to control the end consumer experiences, we suspect Apple will expand to monetizing 3P apps. This will bring them closer to controlling the experience on their devices - users when they interact with Apple apps and 3P apps will be under more Apple visibility. For this Apple can build a privacy centric monetization SDK which will be available for 3P Apps to adopt. (there is a clear path to making the SDK pre-integrated within iOS, reducing the work for 3P Apps to integrate yet another Apple SDK).

Commented [6]: Need to ask Corry and Dan

- How big would each options would be, potential margin that can be gained.

Commented [7]: I think we need to address this in terms of what they will build out. An App Ads business on iOS might be \$25B TAM today (of which Apple has ~\$4B). However they could move to other types of ad formats (Shopping, search, etc), which would be a significantly larger TAM. If helpful, we have pulled Google Search Revenue by segment to get a sense of the search opp for Apple.

Commented [8]: Yes thats exactly the line of thought, for this scenario, can you share what are the segments for Android? Dont need numbers just the segment slices to validate thinking.. My initial thoughts

1/ On device native search/ spotlight search
2/ Additional search, native slots in app store
3/ App store -> App pages -> Additional ad slots
4/ Additional ad slots on Apple O&O apps

Commented [9]: I'll look to see if we can pull this information from DasNav or ask someone in finance for support.

Commented [10]: @davidzutter@google.com on my team is helping to get this information while I'm OOO.

Commented [11]: thanks Dan,
@corrywang@google.com FYI as well

Commented [12]: Yes I have asked Dave to coordinate with Corry. Thx for covering, guys!

Commented [13]: Do you all think the TV opportunity is potentially higher than \$1-2B? Hulu does way more than this today, and if Apple continues to invest in content / bundle with hardware, could they see numbers multiples higher in the "long-term"?

Commented [14]: Fine by me - raised to \$1-5B. My benchmark was Roku (\$1-2B-ish ad revenues right now), which had lower revenues because they were monetizing via advertising as a platform (i.e. they take a minority cut of ad inventory, instead of 100% of the ad inventory viewed by users on their platform), but I guess if TV+ actually takes off for real, this could get much bigger

Commented [15]: Thanks. Bottom line is that Apple won't pursue this for \$1-2B - that's a rounding error for them, and the juice would not be worth the squeeze. They won't pursue this unless they see a several billion...

Commented [16]: @corrywang@google.com would you any insight on RPU if the long term potential is realized? Trying to link Exhibit 4 to Exhibit 3
Assigned to Corry Wang

Commented [17]: As a rule of thumb, Apple currently has 1B iPhone users, so you can just divide all these numbers by 1B. In other words, ads is a \$4/user business today, a \$6-10/user business in the...

Apple will differentiate their SDK on privacy where all the data, personalization and User ID stays on the phone. This approach will definitely give 3P app pubs better signals for monetization and measurement than their current 3P SDK. Apple will not go with granular targeting with common targeting attributes but more aggregated data and models.

In addition, **Apple is likely to restrict link decoration** with some ATT future version updates which will make their privacy centric SDK story even stronger. (Have to cover this deeper when working on mitigation options).

Now equipped with a privacy centric SDK integration with 3P Apps, Apple can take 2 approaches for their business model,

Option #1: Apple SDK on 3P Apps as an audience extension for their O&O ad network

Building ad tech to control both buy and sell side will definitely get Apple into a lot of scrutiny and anti-competitive threats especially with this model where Apple SDK inventory on 3PApps is locked down to Apple walled garden network. Regulatory pressures on creating unique data differentiation via the Apple SDK has high potential to impact Apple's TRUST capital,

Option #2: Apple SDK on 3P Apps as a monetization play focused on sell side

A better option to deliver on their motivation with a messaging oriented around user privacy, I suspect Apple will focus on playing on the publisher side of the ecosystem - they are a publisher built for a publisher narrative with an SDK which is user privacy centric and Apple is providing capabilities for 3P publishers to monetize and support the digital economy.

This is a more sustainable business model that has lesser impact to TRUST capital. This will also help the move of control on targeting and measurement towards publishers (anyways to an extent happening with 3PCD & ATT) with advertisers relying on Apple for measurement and reporting. Will be expanding on this option as mid term.

How it can play out:

Inventory	<p>Apple expands to 3P Apps with their SDK</p> <ul style="list-style-type: none">● With this inventory expansion, Apple network business (short term option explored above) will have an audience extension for advertisers to buy on 3P Apps that use Apple SDK.● The 3P App publishers have the option to plug into multiple demand sources which will all adhere to Apple privacy rules of data staying on the device and higher control towards brand safety and fraud.● Apple will make a cut on every impression delivered through the Apple SDK.
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Commented [18]: @snehath@google.com - would love to hear what C Combette / D Mitby thought about the likelihood of Apple doing this. Do they see this as a longer term move?

Data	<p>Everything will be declared to be 1P data.</p> <ul style="list-style-type: none">● With an SDK integrated into the iOS, it is highly plausible to go with the narrative that all data used within the Apple monetization SDK is 1P data to Apple.● Can differentiate on unique measurement that plays on all data on the device being 1P data and tying to Apple payments for closed loop measurements.● Note that today, ASA uses a different proprietary measurement than SkAd measurement solution.
Tech	<ul style="list-style-type: none">● Will take time to build and iterate but once launched adoption can be easy with an integrated SDK in their iOS upgrades.● Will need to build out supply side capabilities from publisher insights and monetization reports.● Further, all payments for advertising can be built on Apple payments making the overall margin E2E higher to operate as a sell side ad tech player.
Timing	2 - 3 years for the SDK and adoption. Late 2025 - mid 2026.
Early Indicators	<ul style="list-style-type: none">● [Watchlist] Hiring of more ad tech talent - data science engineers, app developers● [Speculation] Hiring of talent from medium scale app publishers.● [Watchlist] Apple earnings will be indicating more focus on services revenue, solidifying their shift from a luxury device brand to a media company.● [Watchlist] Leadership changes/departures from Apple.
Regulatory Risks	<p>Medium</p> <p>The risk of losing out on Apple Pay exclusivity will have an impact on how this plays out.</p>

Commented [19]: Blake's title: <https://screenshot.googleplex.com/5j5TkJucuf3mD8U>

Commented [20]: @brjones@google.com

Commented [21]: @snehath@google.com Redacted - Privilege

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How big a business?

We believe Apple's Ad Tech business can likely become a \$3.5-10B business, aka 20-50% the size of IOS In-App Advertising Revenue with take rates similar to Google; G



Exhibit 5 : Apple’s AdTech Revenue Opportunity on IOS In-App Advertising Revenue

Source: IDC, Ads SPI team estimates (davidzutter@)

Worldwide total in-app advertising revenue includes gaming and non-gaming in-app display, video, and other advertising, but excludes in-app search advertising.

Long Term: Expands to monetize safari web

If Apple is successful in short and mid term options, then the next big expansion would be to monetize Safari web - across apple devices - macbook and iphone and to all media formats - display, video, native etc.. With this option, we suspect Apple might get into building web services from - search, maps, music, mail etc.. to boost their O&O web presence. When they reach here, Apple building in house search is a most promising option.

Note that web expansion is less likely based on what we can speculate today as a focus area for Apple especially with consumer behavior increasingly being on mobile devices. But the overall option of expanding its O&O presence into services is very lucrative for Apple with a mobile centric search experience for their devices.

How it can play out:

Inventory	<div>In addition to Apple O&O Apps and 3P Apps on mobile, Apple would expand its buying interface to also have access to safari - mobile web and desktop web.</div> <div><div></div>● Access to O&O and 3P web properties on safari, apple devices</div> <div><div></div>● Expansion to traditional formats - display, video, native</div> <div><div></div>● Search ads expansion with in house search experience for safari</div>
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Commented [24]: @dyc@google.com to my reply to your previous comment.

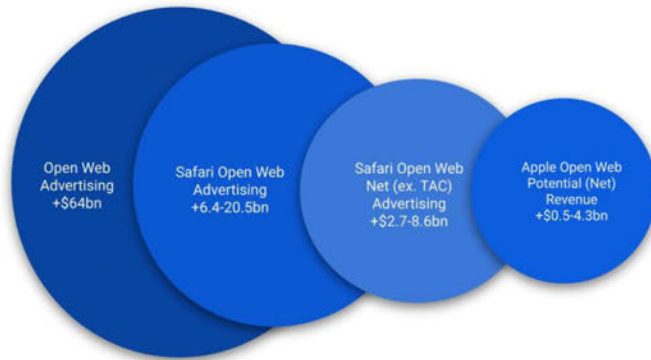
Copying your comment over for completeness,

@snehath@google.com - Apple is investing heavily in Spotlight search today. Is it fair to say that over the longer term they will try to shift search behavior towards Spotlight vs Safari? This would allow them to keep monetizing their TAC agreement while also building their O&O search business. It would also likely be a good user experience since users can search directly for apps and on the web in a single location without opening a browser directly from the home screen - akin to Android Homescreen Search today.

	<p>terms of targeting or measurement. Aggregate data signals and crowd anonymity based measurement.</p> <ul style="list-style-type: none"> ● Modeled audiences across web and In App, high fidelity targeting audiences. ● Potential to link devices and get cross device targeting signals and measurement across apple devices using Apple ID. ● Linking across devices can be made to work with a privacy safe icloud solution, all user data associated stays on the apple ecosystem - device or icloud.
Tech	<ul style="list-style-type: none"> ● Requires additional investments but will be incremental to building on top of the mid term option. Core functions of targeting, bidding and other heavier lift builds are ● Will continue to be an objective based network buy with limited targeting and measurement options. ● Then move onto to building additional targeting criterias and gradually bringing in house all bidding for O&O,
Timing	7 - 10 years for the first version of the ad network. ~ 2028-2030.
Early Indicators	<ul style="list-style-type: none"> ● Too far out to predict.
Regulatory Risks	<p>Med-High</p> <p>Apple would be essentially making all of their devices monetize better with their advertising solutions due to differentiated rules for data, targeting and measurement.</p>

How big a business?

The highly fragmented open web display advertising market is a \$64bn industry. Apple's Safari web browser is the second most used web browser in the world with less than 20% market share and has never been as popular as Google Chrome, which dominates the worldwide market share. The opportunity for Apple to monetize Safari web across Apple devices is a \$6.4-20bn opportunity but given the high TAC (the cost to obtain the right to place advertising on publishers digital websites), the net revenue opportunity is \$2.7-8.6bn.



***** END OF REVIEW *****

Challenges and Constraints

Implications to market and Google

Open Items/Questions

1. Understanding how ASA works today?
2. Is Apple news available programmatically outside of NBCU?

Appendix

Additional Motivations discussed and deprioritized

#3 Regulatory pressures

Considering ATT has wiped away billions of dollars from the ecosystem and affected both big publishers (meta,snap) and small mobile app developers, there is pressure on Apple to provide alternate solutions to support monetization for pubs in the iOS ecosystem. Apple is also said to be favoring and increasing its search ad business since the introduction of ATT. Apple has made measurement available with its SkAd Network API which is already at version 4.0 and is said to be "no longer actively painful" to use. One should expect more apple driven advertising standards/API as they try to balance increasing Apple advertising revenue and keeping regulators at bay.

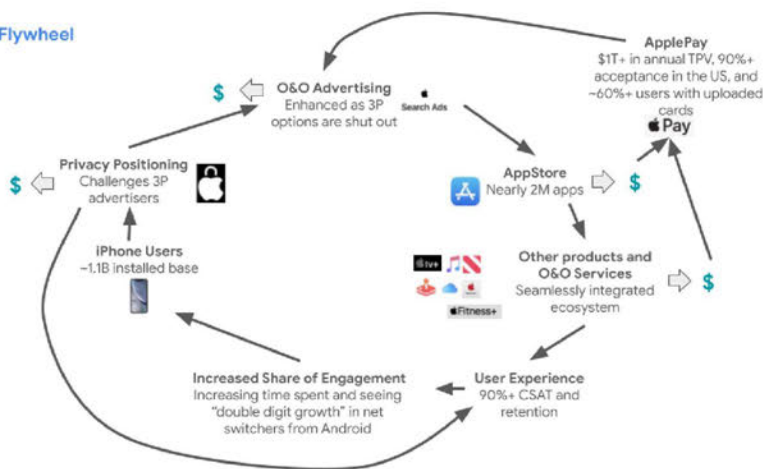
Commented [25]: For me the biggest regulatory risks to Apple from an impact perspective is (1) risk to app store monetization if they are required to allow 3P app stores (although PlayStore has majority share on Android today), or (2) risk that they lose TAC through DMA or inevitable US regulation on search engine choice.

#4 Benevolent innovator for digital advertising economy

Highly unlikely.

Dan's flywheel potential better representation of motivation #1

Apple Flywheel



Commented [26]: Not my proudest visual, but perhaps it makes sense to represent Apple in terms of its flywheel here? General idea is that iPhone is its centerpiece which drives app store, products/services (ie, ecosystem), user experience, O&O advertising, and more iPhone users. Would love your thoughts. @davidzutter@google.com @corrywang@google.com

Commented [27]: Seems repetitive with the chart above.

Commented [28]: i was thinking of something similar yesterday night (not exactly flywheel but more like 2 pronged approach) to show the services revenue motivation point, that apple is pushing on both camps of org - non ads camps with subscription and ecommerce enablement via apple pay and the ads camp with ASA and new ad formats, will think through more later during the day.

Commented [29]: Yes, to be clear I was thinking of this as a replacement to the bullseye chart above - not in addition to.

Commented [30]: Oh ok, then let's discuss when you are back, moving to appendix for now.

Additional options discussed and deprioritized

Very Long-Term: Full-Funnel Ad Tech Ecosystem: Buyside & Sellside

Apple starts with O&O and builds an inventory extension to 3P apps privacy centric SDK for 3P app monetization: buy side and sell side. Apple can build an advertising SDK for 3P app publishers to monetize with a focus on privacy. Apple does have excess demand today for their O&O inventory which can be easily extended to 3P inventory.

Meeting Notes

High level structure

- Describe the situation
 - What is true and what do we know today?
- Scenario Analysis
 - What are they likely to build?
 - 1-2 ways of how this can play out ?
- Implications for Google & Ads
 - What does this mean for the market and for Google?

Eduardo's horizontal

Product implications
Ecosystem
Regulatory perspectives

Documents

[Everything we know about Apple Search Ad financials](#)

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1096277/Mobile_ecosystems_final_report_-_full_draft_-_FINAL_.pdf

News Articles

August 2022

Commented [31]: It could be interesting to show the various Apple scenarios as a spectrum. For example: expansion of Ads horizontally for app promo inventory (Search -> Display O&O -> app network / publishers) as well as vertically. For example, expansion into non-app promo, broader DR.

Additionally, it would be interesting to show a spectrum of privacy design options. From Eduardo's speculation (on the more conservative side) that everything will be "on device & federated" to demonstrate "superior privacy" future of ads. A less conservative but more lucrative scenario = Apple relies on their Apple Privacy brand / user trust - for example, they could leverage iCloud login as a "privacy safe" credential, and expand their ads to anywhere someone is logged in with iCloud / Apple Sign In: Safari, 3P apps, etc.

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@brjones@google.com

<https://www.bloomberg.com/news/newsletters/2022-08-14/apple-aapl-set-to-expand-advertising-bringing-ads-to-maps-tv-and-books-apps-l6tdqqmg>

<https://digiday.com/media/apple-is-building-a-demand-side-platform/>
<https://www.adexchanger.com/mobile/why-would-apples-idsp-succeed-when-iad-failed/>

<https://www.wsj.com/articles/inside-the-apple-vs-facebook-privacy-fight-11660317376>

July 2022

<https://www.macrumors.com/2022/07/29/new-app-store-ads-today-tab/>
<https://www.barrons.com/articles/apple-stock-ad-business-51657826496>

June 2022

<https://www.apple.com/newsroom/2022/06/apple-and-mls-to-present-all-mls-matches-for-10-years-beginning-in-2023/>
<https://www.adexchanger.com/adexplainer/adexplainer-meet-skadnetwork-4-0-apples-updated-attribution-api-thats-no-longer-actively-painful-to-use/>

Sep 2021

<https://digiday.com/marketing/cheat-sheet-how-apples-att-is-giving-it-more-influence-over-ad-dollars/>

Older drafts

Short Term

How it can play out:

In the short-term, we suspect Apple's adtech focus will be building a 'unified buying door' for new ad formats launched across their owned & operated properties. Today, Apple's ads business is primarily limited to Search Ads within its App Store. In the next several years, however, we anticipate Apple will be rolling out new ad experiences in other O&O properties such as Apple Maps, Apple TV, and Spotlight. This will require an expansion (or perhaps replacement) of Apple's existing Search Ads buying dashboard, which is fairly barebones.

Apple is yet to unleash the Apple ID cross device verified data into monetization.

Apple builds an integrated buying platform for advertisers to buy across all of their devices and experiences - search, app and TV inventory (later phase). Apple would rewrite advertising targeting as we know it today to be less granular targeted and lean in more on contextual and behavioral model based targeting vs age/demo etc..

An option like PMax with objective based buying seems a high possibility of how Apple O&O would be monetized.